

FORM PTO-1390
(REV. 1-98)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER

BO 40971

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

09/423368

INTERNATIONAL APPLICATION NO. PCT/NL98/00245	INTERNATIONAL FILING DATE 04 MAY 1998	PRIORITY DATE CLAIMED 06 MAY 1997
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TITLE OF INVENTION
TENSIONER

APPLICANT(S) FOR DO/EO/US

Anne Klaas DE GROOT and Piet KALKMAN

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.
2. This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.
3. This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. has been transmitted by the International Bureau.
 - c. is not required, as the application was filed in the United States Receiving Office (RO/US).
6. A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. have been transmitted by the International Bureau.
 - c. have not been made; however, the time limit for making such amendments has NOT expired.
 - d. have not been made and will not be made.
8. A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. A translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern document(s) or information included:

11. An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. A FIRST preliminary amendment.
 - A SECOND or SUBSEQUENT preliminary amendment.
14. A substitute specification.
15. A change of power of attorney and/or address letter.
16. Other items or information: International Preliminary Examination Report (PCT/IPEA/409)
International Search Report (PCT/ISA/210)
Patent Application Data Entry Format Sheet

U.S. APPLICATION NO. (if known, see 37 CFR 1.17)

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INTERNATIONAL APPLICATION NO.

PCT/NL98/00245

ATTORNEY'S DOCKET NUMBER

04 MAY 1998

17. The following fees are submitted:**BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)):**

Neither international preliminary examination fee (37 CFR 1.482)
nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO
and International Search Report not prepared by the EPO or JPO \$ 970.00

International preliminary examination fee (37 CFR 1.482) not paid to
USPTO but International Search Report prepared by the EPO or JPO \$840.00

International preliminary examination fee (37 CFR 1.482) not paid to USPTO
but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$760.00

International preliminary examination fee (37 CFR 1.482) paid to USPTO
but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$670.00

International preliminary examination fee (37 CFR 1.482) paid to USPTO
and all claims satisfied provisions of PCT Article 33(1)-(4) \$96.00

ENTER APPROPRIATE BASIC FEE AMOUNT =**CALCULATIONS PTO USE ONLY**

Surcharge of \$130.00 for furnishing the oath or declaration later than 20 30 months from the earliest claimed priority date (37 CFR 1.492(e)).

\$ 840

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$
Total claims	11 - 20 =	0	x \$18.00	\$
Independent claims	1 - 3 =	0	x \$78.00	\$
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$260.00	\$

TOTAL OF ABOVE CALCULATIONS = \$ 970

Reduction of 1/2 for filing by small entity, if applicable. A Small Entity Statement
must also be filed (Note 37 CFR 1.9, 1.27, 1.28).

+

SUBTOTAL = \$ 970

Processing fee of \$130.00 for furnishing the English translation later than 20 30 months from the earliest claimed priority date (37 CFR 1.492(f)).

\$

TOTAL NATIONAL FEE = \$ 970

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be
accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +

\$

TOTAL FEES ENCLOSED = \$ 970

Amount to be refunded:	\$
charged:	\$

a. A check in the amount of \$ 970. to cover the above fees is enclosed.b. Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees.
A duplicate copy of this sheet is enclosed.c. The Commissioner is hereby authorized to charge any additional fees which may be required by
37 CFR 1.16 and 1.17, or credit any overpayment to Deposit Account No. 25-0120. A duplicate
copy of this sheet is enclosed.NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR
1.137 (a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

November 8, 1999

Young & Thompson
745 South 23rd Street
2nd Floor
Arlington, VA 22202
(703) 521-2297



Benoit Castel

SIGNATURE

Benoit Castel

NAME

35,041

REGISTRATION NUMBER

**VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) & 1.27(c))--SMALL BUSINESS CONCERN**

Docket Number (Optional)

Applicant or Patentee: Anne Klaas DE GROOT et al.
 Serial or Patent No.: 09/423,368
 Filed or Issued: November 8, 1999
 Title: TENSIONER

I hereby declare that I am

the owner of the small business concern identified below:
 an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN Itrec B.V.
 ADDRESS OF SMALL BUSINESS CONCERN P. O. Box 150,
NL-3100 AD SCHIEDAM, The Netherlands

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

the specification filed herewith with title as listed above.
 the application identified above.
 the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights in the invention must file separate verified statements averring to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization having any rights in the invention is listed below:

no such person, concern, or organization exists.
 each such person, concern or organization is listed below.

Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING Anne Klaas DE GROOT

TITLE OF PERSON IF OTHER THAN OWNER Director

ADDRESS OF PERSON SIGNING P. O. box 150, NL-3100 AD SCHIEDAM, The Netherlands

SIGNATURE Anne Klaas DE GROOT DATE 30 November 1999
 DE GROOT, Anne Klaas (Director)

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420 Rec'd PCT/PTO 38 NOV 1999

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of
Anne Klaas DE GROOT et al.
Serial No. (unknown)
Filed herewith
TENSIONER

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

Prior to the first Official Action and calculation of the filing fee, please amend the above-identified application as follows:

IN THE CLAIMS:

Claim 3, line 1, cancel "or 2".

Claim 4, line 1, cancel "2 or 3".

Claim 5, line 1, cancel "2, 3, or 4".

Claim 6, lines 1 and 2, change "one of the preceding claims" to --Claim 1--.

Add the following new claims:

--7. Tensioner according to Claim 2, characterized in that the conveyor means (3) comprise attachment eyelets (38) for attaching the conveyor means (3) to a main frame element (50).

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--8. Tensioner according to Claim 2, the conveyor means comprising a base frame and an endless conveyor which is arranged displaceably thereon, characterized in that the said conveyor (39) is attached to the said base frame (31) with the aid of at least one hydraulic cylinder (32) and at least a first and a second pivot arm (33) such that it can move essentially parallel with respect to the base frame (31).

--9. Tensioner according to Claim 3, the conveyor means comprising a base frame and an endless conveyor which is arranged displaceably thereon, characterized in that the said conveyor (39) is attached to the said base frame (31) with the aid of at least one hydraulic cylinder (32) and at least a first and a second pivot arm (33) such that it can move essentially parallel with respect to the base frame (31).

--10. Tensioner according to Claim 7, the conveyor means comprising a base frame and an endless conveyor which is arranged displaceably thereon, characterized in that the said conveyor (39) is attached to the said base frame (31) with the aid of at least one hydraulic cylinder (32) and at least a first and a second pivot arm (33) such that it can move essentially parallel with respect to the base frame (31).

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--11. Tensioner according to Claim 10, characterized in that the conveyor (39) is provided with a drive chain (36) of double design.--

Respectfully submitted,

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Title: Tensioner

The invention relates to a tensioner, for clamping cables, flexible pipes or bars and moving them forwards in a controlled manner, comprising at least two conveyor means, each intended to displace one or more clamping members, the shape of which is adapted to the external shape of the cables, flexible pipes or bars, and the conveyor means each being attached to a main frame element, all this in such a manner that the clamping members can be displaced while clamped around the cables, flexible pipes or bars.

Tensioners are used, inter alia, when laying cables and flexible pipes from a ship, for example on the sea bed. The cables, the flexible pipes or the bars are guided from the ship towards the sea bed using the tensioner, via the so-called S- or J-method. If the S-method is used, the cable or the flexible pipe leaves the ship essentially in the horizontal direction, and the cable or the flexible pipe will be connected to the part which has already been positioned on the sea bed (ground) via an S-bend. If the J-method is used, the cable or the flexible pipe leaves the ship essentially in the vertical direction and is connected to the part which has already been laid on the ground via a J-shaped bend.

The role of the tensioner is twofold. Firstly, the tensioner has to be able to clamp the cable or the flexible pipe fixedly, in order to prevent it leaving the ship at an uncontrolled speed as a result of the weight of the section which is transferred overboard. The weight which the tensioner has to stop in this way can rise to a very high level. The tensioner therefore has to be able to exert a high clamping force on the cable or the flexible pipe. The second role of the tensioner is to move the cables and the flexible pipes forwards. The maximum speed at which this takes place is dependent, inter alia, on the condition of the ground at that location. Moreover, the cable or the flexible pipe in most cases still has to be assembled on the deck of the ship during laying. The speed at which the assembled part is moved overboard is therefore dependent on the time which is required for assembling the cable or the flexible pipe itself.

In order to be able to satisfy the demands placed on the tensioners, generally at least two endless conveyors are incorporated in the tensioners according to the prior art. By moving the conveyors towards one another with a considerable force, a

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high clamping force can be exerted on the cable or flexible pipe positioned between them. By then driving the conveyors, the cable or the flexible pipe can be advanced without losing the clamping force. Since the cables and the flexible pipes have an essentially round cross-section, the conveyors in a tensioner with two conveyors 5 therein are positioned at an angle of 180°. In a tensioner with three conveyors, they form an angle of 120° with respect to one another, and in the case of four conveyors their mutual angle is in each case 90°.

A significant drawback of the tensioners according to the prior art is that the 10 design of a tensioner and the number of conveyors which are fitted therein depends on the type of cable or flexible pipe for which the tensioner is designed. For example, a flexible pipe with, for example, a large diameter and a relatively thin wall may be pressed into an elliptical shape by two conveyors. For this reason, the tensioner for flexible pipes of this nature is generally equipped with three or four conveyors. This means that the operators of the ships for laying cables and flexible 15 pipes have to purchase a separate tensioner for each type of cable or flexible pipe, a fact which entails relatively high investment costs.

Another significant drawback of the tensioners according to the prior art is, furthermore, that there is generally only one tensioner on board a ship, owing to lack 20 of space. It is therefore impossible to change from one type of tensioner to another type of tensioner while at sea.

A third drawback of the tensioners according to the prior art is that the tensioners are relatively bulky. Owing to the size and weight of the tensioners according to the prior art, they are extremely expensive to transport.

The object of the present invention is to provide a tensioner which does not 25 exhibit the drawbacks of the tensioners according to the prior art.

In order to achieve this object, the tensioner according to the present invention is provided with conveyor means with clamping members, in which the conveyor means with the clamping members are of modular design, such that various tensioner designs can be constructed with the aid of a number of conveyor means and a 30 number of main frame elements.

The advantage of a tensioner of modular design is firstly the fact that various tensioners can be put together with the aid of a limited number of (at least two) identical conveyor means. The availability of the tensioner which is to be of modular

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construction means that it is not necessary to purchase a new type of tensioner for each new type of cable or flexible pipe. Instead of a large number of different tensioners, a user only needs to purchase a limited number of these conveyor means. Moreover, the tensioners which are to be of modular construction are of relatively low weight and can be put together in a compact manner.

It is attempted to make the conveyor means with the clamping members of modular design in such a manner that they fit in an ISO container.

By adapting the dimensions of the conveyor means to the size of ISO containers, the conveyor means can be transported in a container or instead of a container. Transporting a tensioner according to the prior art always requires special precautionary measures and is therefore relatively expensive. By adapting the dimensions of the conveyor means to the dimensions of ISO containers, transporting the tensioner modules according to the present invention does not require any special precautionary measures. The transport costs for a modular tensioner will therefore be much lower than the transport costs for a bulky tensioner according to the prior art.

It is advantageous if the conveyor means comprise attachment eyelets for attaching the conveyor means to a main frame element.

The advantage of this measure is that a tensioner according to the present invention can be put together or altered easily and in a relatively short time.

The tensioner according to the present invention is improved still further if the conveyor means comprise a base frame and a conveyor which is arranged displaceably thereon, the conveyor being attached to the said base frame with the aid of at least one hydraulic cylinder and at least a first and a second pivot arm such that it can move essentially parallel with respect to the said base frame.

Moreover, in this case it is advantageous if the hydraulic cylinder and the pivot arms are all attached both to the base frame and to the conveyor, the attachment position of the hydraulic cylinder on the base frame corresponding to the attachment position of the first pivot arm thereon, and the attachment position of the cylinder on the conveyor corresponding to the attachment position of the second pivot arm thereon.

The advantage of a design of this nature is that only the hydraulic cylinder has to be actuated in order to displace the conveyor with respect to the base frame. In this design, the conveyor is kept parallel along the base frame by means of the pivot

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arms.

In an advantageous embodiment of the present invention, the conveyor means comprise a conveyor which is provided with a drive chain of double design.

By employing a double chain, the conveyor will be less inclined to start to tilt,
5 since the support provided by the belt is made wider. In a manner of speaking, the "wheel base" of the belt becomes wider as a result of a double chain being used. This measure improves the stability of the tensioner according to the present invention considerably by comparison with tensioners according to the prior art.

The present invention relates not only to a tensioner but also to a conveyor
10 means of modular design which is intended for the tensioner according to the present invention. It is advantageous here for at least two conveyor means according to the present invention to be connected to one another by means of main frame elements, in which case preferably a limited number of variants of the said main frame elements are sufficient for constructing a tensioner having 2, 3, 4 or more conveyor
15 means, as desired. This has the advantage that a tensioner which is suitable for any type of cable or flexible pipe can be constructed using a limited number of means together with a limited number of main frame elements. Furthermore, this offers the possibility of very compact design.

The construction and use of the present invention will be explained with
20 reference to the following drawings, in which:

Figure 1 diagrammatically depicts how a cable or a flexible pipe is moved overboard via the S-method;

Figure 2 diagrammatically depicts how a cable or a flexible pipe is moved overboard via the J-method;

25 Figure 3 is a side view of the conveyor means according to the present invention;

Figure 4 is a cross-section on line IV-IV of the conveyor means in accordance with Figure 3;

30 Figure 5 is a cross-section of a tensioner with three conveyor means according to the present invention therein;

Figure 6 is a cross-section of a tensioner with two or four conveyor means according to the present invention therein.

Figure 1 diagrammatically depicts the case in which a tensioner 2 which is

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positioned on a ship 1 is used to lay a cable or a flexible pipe 4 on the bed 5 of, for example, the sea via the so-called S-method. It can be seen in Figure 1 that the cable or the flexible pipe 4 leaves the ship 1 essentially in the horizontal direction. That part of the cable or flexible pipe 4 which is clamped fixedly by means of the tensioner 2 is connected via an S-bend to the part which has already been laid on the bed 5.

Figure 2 diagrammatically depicts the case in which a cable or a flexible pipe 4 is laid on the bed 5 of, for example, the sea from a ship 1, with the aid of a tensioner 2, via the so-called J-method. It can be seen in the figure that the cable or flexible pipe 4 leaves the ship 1 essentially in the vertical direction. That part of the cable or the flexible pipe 4 which is clamped fixedly by means of the tensioner 2 is connected in a J-shaped bend to the part which has already been placed on the bed 5.

It can be seen from Figures 1 and 2 that the tensioner 2 has two functions. Firstly, the tensioner 2 has to prevent the cable or the flexible pipe 4 from leaving the ship 1 of its own accord as a result of its own weight. For this reason, the tensioner 2 has to be able to clamp the cable or the flexible pipe 4 fixedly. Secondly, the tensioner 2 has to be able to move the cable or flexible pipe 4 overboard without losing this clamping force. The tensioner 2 is therefore provided with at least two conveyor means 3, comprising conveyors. The conveyors can be moved towards one another in order to clamp a cable or flexible pipe 4 fixedly. By moreover driving the conveyors, the cable or flexible pipe 4 can leave the ship 1 at a controlled speed.

Figure 3 shows the conveyor means according to the present invention. The conveyor means 3 comprise a base frame 31 and a conveyor 39 which is arranged movably with respect to this base frame 31. The conveyor 39 is attached, for example, to the base frame 31 with the aid of at least one hydraulic cylinder 32 and two pivot arms 33. The hydraulic cylinder 32 and the pivot arms 33 are preferably attached to the base frame 31 via attachment eyelets 34. For its part, the conveyor 39 comprises, inter alia, clamping members 35 which can be pushed onto a cable or flexible pipe 4 which is to be displaced. The clamping members 35 are positioned on a chain 36. This chain 36 is preferably of double design, in order to be able to support the clamping members 35 over their width (cf. Figure 4). The chain 36 of the conveyor is advanced, for example, with the aid of a toothed wheel 37. Moreover, the base frame 31 is provided with attachment eyelets 38, by means of which the

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conveyor means 3 can be connected in a simple manner to, for example, a main frame.

Figure 4 shows a cross-section of the conveyor means 3 on line IV-IV, in accordance with Figure 3. The double chain 36 ensures that the clamping members 35 cannot tilt with respect to the base frame 31, not even if these members 35 are subjected to relatively high compressive forces. It is advantageous if the clamping members 35 have an essentially annular or V-shaped recess 40 on their outwardly directed surface. As a result, the overall circumference which the clamping members 35 of conveyors 39 placed in a tensioner (cf. Figures 5 and 6) delimit will also be annular.

Figure 5 shows a tensioner which is composed of three conveyor means 3 according to the present invention. The modules 3 are attached to one another with the aid of main frame elements 50. It can be seen in the figure that the main frame elements 50 are connected to the conveyor means 3 via the attachment eyelets 38.

Figure 6 shows the situation where a cable or a flexible pipe 4 is surrounded by two or four (shown in dashed lines) conveyor means 3 according to the invention.

It can be seen from Figures 5 and 6 that it is possible, as desired, to assemble two, three, four or, if desired, even more conveyor means 3 according to the present invention to form one tensioner. The number of conveyor means 3 to be used will depend on, inter alia, the thickness, the stiffness and the weight of the cable or flexible pipe to be displaced. The advantage of this is that it is not necessary to build a special tensioner for each type of cable or flexible pipe. Various different tensioners can be constructed using a limited number of conveyor means 3 according to the present invention and a number of standard main frame elements 50.

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CLAIMS

1. Tensioner, for clamping cables, flexible pipes or bars and moving them forwards in a controlled manner, comprising at least two conveyor means, each intended to displace one or more clamping members, the shape of which is adapted to the external shape of the cables, flexible pipes or bars, and the conveyor means each being attached to a main frame element, all this in such a manner that the clamping members can be displaced while clamped around the cables, flexible pipes or bars, characterized in that the conveyor means (3) with the clamping members (35) are of modular design, such that various tensioner designs can be constructed with the aid of a number of conveyor means (3) and a number of main frame elements (50).
5. 10. Tensioner according to Claim 1, characterized in that the conveyor means (3) with the clamping members (35) are designed in such a manner that they each fit in an ISO container.
3. 15. Tensioner according to Claim 1 or 2, characterized in that the conveyor means (3) comprise attachment eyelets (38) for attaching the conveyor means (3) to a main frame element (50).
4. 20. Tensioner according to Claim 1, 2 or 3, the conveyor means comprising a base frame and an endless conveyor which is arranged displaceably thereon, characterized in that the said conveyor (39) is attached to the said base frame (31) with the aid of at least one hydraulic cylinder (32) and at least a first and a second pivot arm (33) such that it can move essentially parallel with respect to the base frame (31).
5. 25. Tensioner according to Claim 1, 2, 3 or 4, characterized in that the conveyor (39) is provided with a drive chain (36) of double design.
6. Conveyor means, intended for the tensioner according to one of the preceding claims.

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fig -1

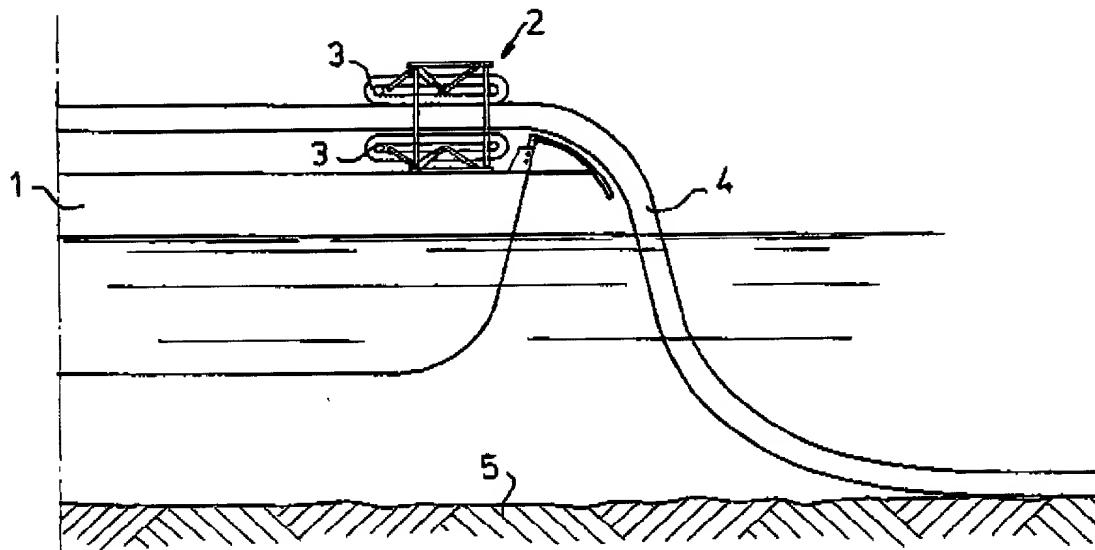
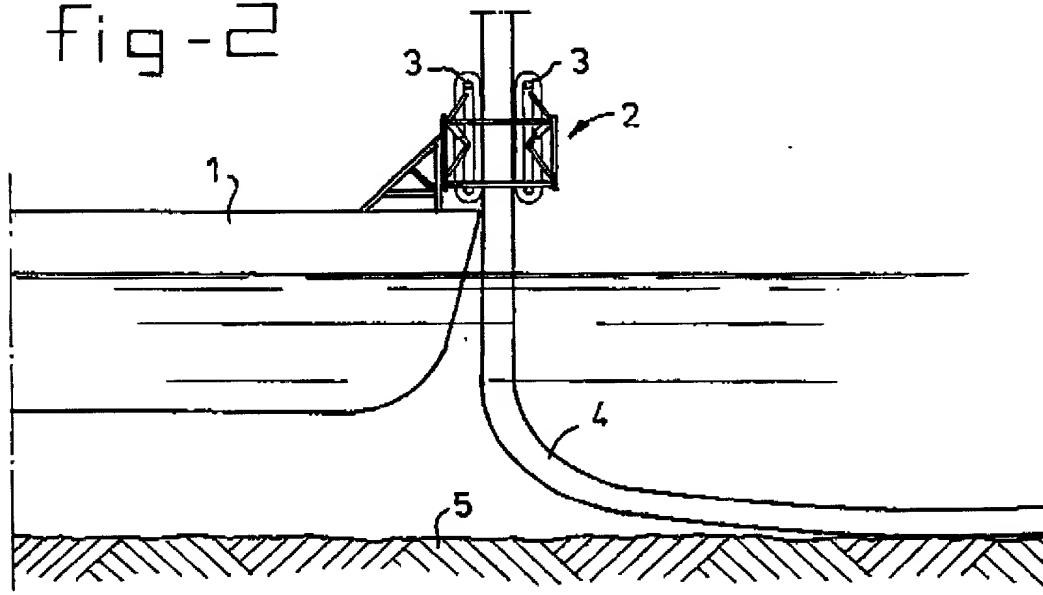


fig -2



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fig - 3

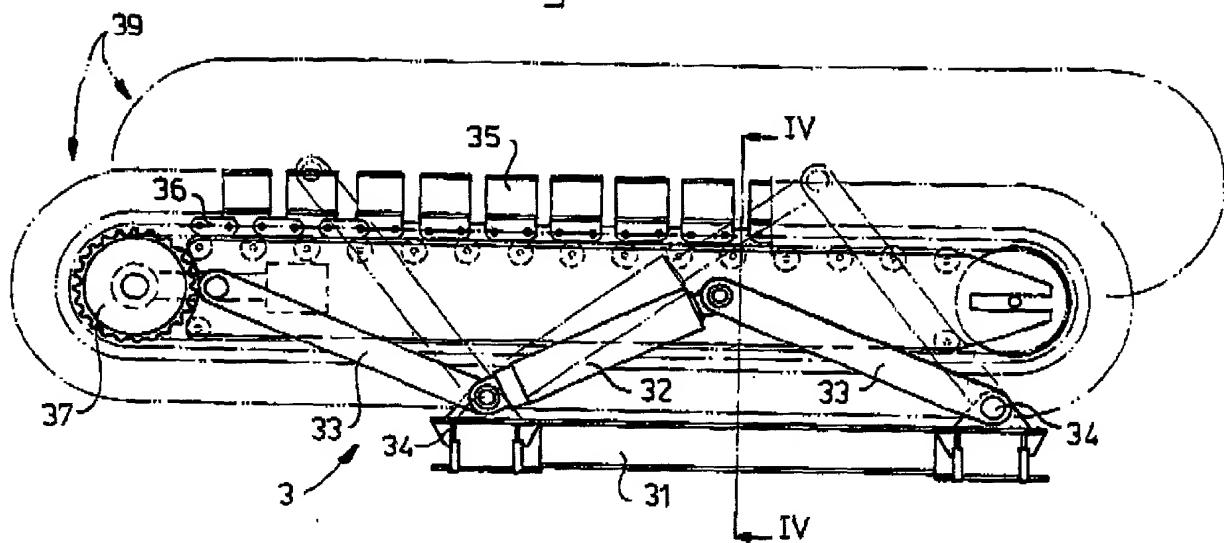
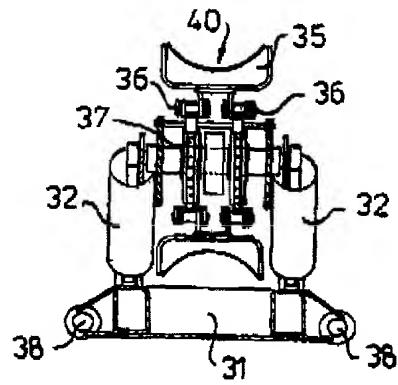


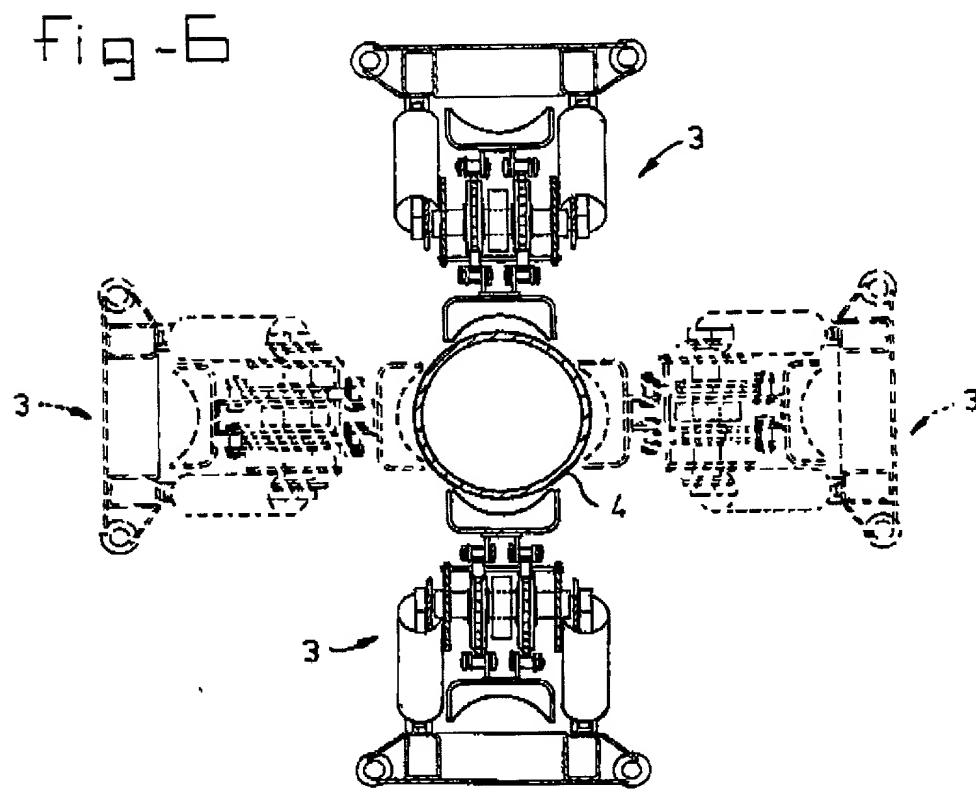
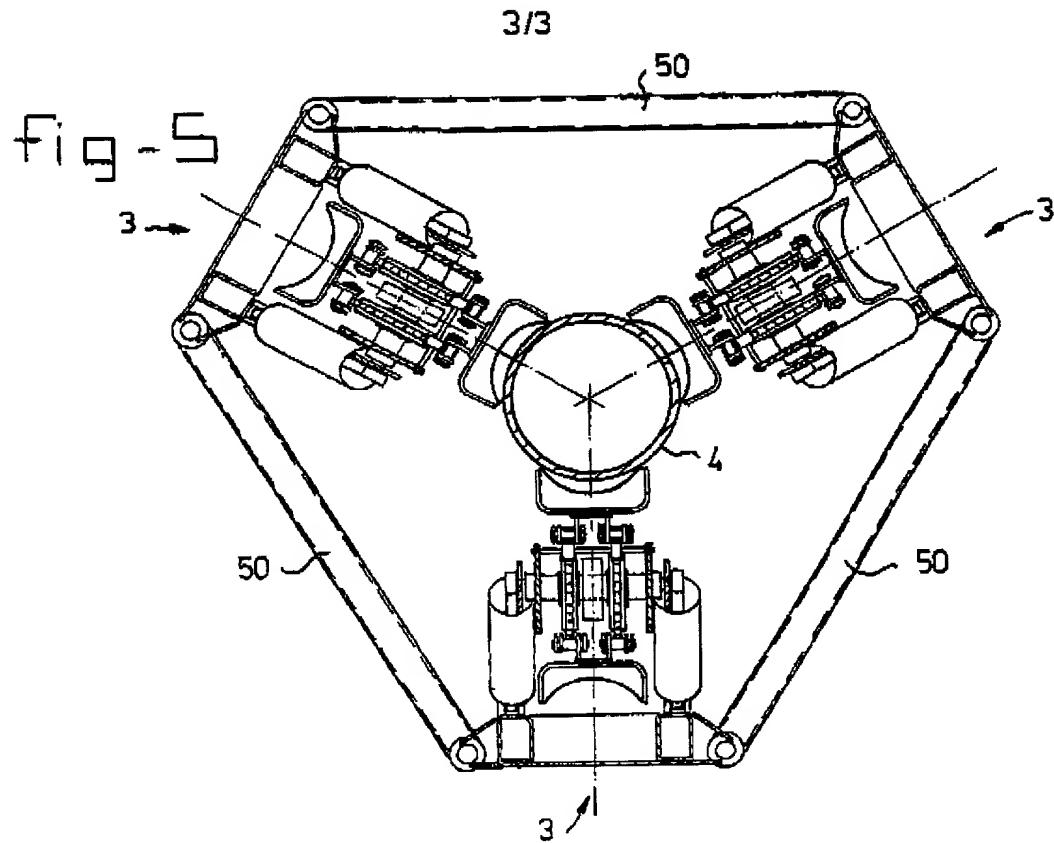
fig - 4



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COMBINED DECLARATION AND POWER OF ATTORNEY

(ORIGINAL DESIGN, NATIONAL STAGE OF PCT OR CIP APPLICATION)

As a below named inventor, I hereby declare that

My residence, post office address and citizenship are as stated below next to my name, I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

"Tensioner"

the specification of which: (complete (a), (b) or (c) for type of application)

REGULAR OR DESIGN APPLICATION

- a.] is attached hereto.
- b. [] was filed on _____ as Application
Serial No. _____ and was amended on _____
(if applicable)

PCT FILED APPLICATION ENTERING NATIONAL STAGE

- c. [X] was described and claimed in International application No. PCT/NL98/00245
filed on May 4, 1998
and as amended on _____ (if any)

ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, paragraph 1.56(a).

In compliance with this duty there is attached an information disclosure statement 37 CFR 1.97

PRIORITY CLAIM

I hereby claim foreign priority benefits under Title 35, United States Code paragraph 119 of any foreign application (s) for patent of inventor's certificate listed below and have also identified below any foreign application for patent of inventor's certificate having a filing date before that of the application on which priority is claimed.

(complete (d) or (e))

BO 4007

d. [] no such applications have been filed
e. [X] such applications have been filed as follows

**EARLIEST FOREIGN APPLICATION(S), IF ANY FILED WITHIN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO SAID APPLICATION**

Country	Application Number	Date of filing (day, month, year)	Date of Issue (day, month, year)	Priority claimed
The Netherlands	1005992	May 6, 1997		Yes

**ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO SAID APPLICATION**

CONTINUATION-IN-PART

(Complete this part only if this is a continuation-in-part application)

I hereby declare claim the benefit under Title 35, United States code, paragraph 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claim of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, paragraph 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, paragraph 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.) (Filing date) (Status) (patented, pending, abandoned)

(Application Serial No.) (Filing date) (Status) (patented, pending, abandoned)

POWER OF ATTORNEY

As a named inventor, I hereby appoint the following attorney(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: Robert J. PATCH, Reg. No. 17,355, Andrew J. PATCH, Reg. No. 32,925, Robert F. HARGEST, Reg. No. 25,590, Benoît CASTEL, Reg. No. 35,041, Eric Jensen, Reg. No. 37,855, and Thomas W. PERKINS, Reg. No. 33,027 c/o YOUNG & THOMPSON, Second Floor, 745 South 23rd Street, Arlington, Virginia 22202.

Address all telephone calls to Young & Thompson at 703/521-2297.

Boycott

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such wilful false statements may jeopardize the validity of the application or any patent issued thereon.

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